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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/767,684   | 01/29/2004  | Ashraf W. Lotfi      | ENP-004             | 7088             |
| 25962  | 7590        | 03/24/2005           | EXAMINER            |                  |
| SLATER & MATSIL, L.L.P.<br>17950 PRESTON RD, SUITE 1000<br>DALLAS, TX 75252-5793 |             |                      | ERDEM, FAZLI        |                  |
|  |             | ART UNIT             |                     | PAPER NUMBER     |
|  |             |                      |                     | 2826             |

DATE MAILED: 03/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                         |                  |  |
|------------------------------|-------------------------|------------------|--|
| <b>Office Action Summary</b> | Application No.         | Applicant(s)     |  |
|                              | 10/767,684              | LOTFI ET AL.     |  |
|                              | Examiner<br>Fazli Erdem | Art Unit<br>2826 |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 29 January 2004.  
 2a) This action is FINAL.                            2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-7 and 15-25 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1,3,6,7,15-21,24 and 25 is/are rejected.  
 7) Claim(s) 2,4,5,22 and 23 is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
 Paper No(s)/Mail Date 08/09/04.

4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_.  
 5) Notice of Informal Patent Application (PTO-152)  
 6) Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Allowable Subject Matter***

1. Claims 2, 4, 5, 22 and 23 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1 and 3 rejected under 35 U.S.C. 102(b) as being anticipated by Mihnea et al. (6,384,447).

Regarding Claims 1 and 3, Mihnea et al. disclose a source/drain regions 112 and 115 including a lightly doped region 133 and heavily doped region 136 adjacent to each other, an oppositely doped well region 128 under and within the channel region 162, , doped region 139 located between the heavily doped region 136 and oppositely doped well region 128 having a doping concentration profile less than a doping concentration profile of the heavily doped region.

Regarding Claim 3, substrate 106 has epitaxial layers.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 6,7, 15-21, 24 and 25 rejected under 35 U.S.C. 103(a) as being unpatentable over Mihnea et al. (6,384,447) in view of Cai et al. (2004/0227190).

Regarding Claims 6,7, 15-21, 24 and 25, Mihnea et al. disclose a source/drain regions 112 and 115 including a lightly doped region 133 and heavily doped region 136 adjacent to each other, an oppositely doped well region 128 under and within the channel region 162, , doped region 139 located between the heavily doped region 136 and oppositely doped well region 128 having a doping concentration profile less than a doping concentration profile of the heavily doped region. Mihnea et al. Fail to disclose the required LDMOS and sidewall/spacers. However, Cai et al. disclose an ESD protection for semiconductor products where in Fig. 1, LDMOS structure has sidewall spacers 44.

It would have been obvious to one of having ordinary skill in the art at the time the invention was made to include the required LDMOS and sidewall spacers in Mihnea et al. as taught by Cai. et al. in order to have semiconductor device with increased performance and reliability.

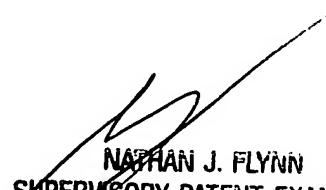
### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fazli Erdem whose telephone number is (571) 272-1914. The examiner can normally be reached on M - F 8:00 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan Flynn can be reached on (571) 272-1915. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

FE  
March 18, 2005

  
NATHAN J. FLYNN  
SUPPLYING PATENT EXAMINER  
TECHNOLOGY CENTER 2800